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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,090	08/27/2003	Ruban Kanapathippillai	42P14037D3	4938

8791 7590 12/20/2005

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EXAMINER

KIM, KENNETH S

ART UNIT PAPER NUMBER

2111

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/649,090

Applicant(s)

KANAPATHIPPILLAI ET AL.

Examiner

Kenneth S. KIM

Art Unit

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

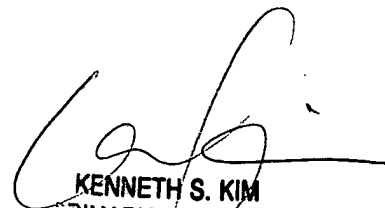
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-31 and 40-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) 25-31 and 40-51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
KENNETH S. KIM  
PRIMARY EXAMINER

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. Claims 25-31 and 40-51 are presented for examination.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 25-31 and 43-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claim 25, it is not clear what is the function and the configuration of the output multiplexer with respect to other elements.

(b) Claims 27, 29, 43, and 46, it is not clear what is the function of the bus state keeper.

(c) Claims 50 and 51, it is not clear how the bus state keeper conserves power.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 25-31 and 40-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Holman, U.S. Patent No. 6,968,419.

Holman teaches the invention as claimed in claim 25 including a memory in an IC to conserve power comprising:

(a) plurality of memory clusters (fig. 3), each of the plurality of memory clusters including one or more memory blocks to store data (312), and an output multiplexer (310; col. 8, line 42),

(b) a memory controller (304) to receive addresses to the memory and control the flow of data into and out the memory,

(c) a plurality of buses and control lines coupled between the plurality of memory clusters and the memory controller to propagate address and data there-between and to control the activity of the plurality of memory clusters (323; col. 5, line 6), and

further teaches as in claims 26-31,

(d) one of the control lines between the memory controller and the plurality of memory clusters is active to activate one of the plurality of memory clusters while others are inactive to conserve power (col. 9, lines 39-44; under control of 826 and 838) – claims 26 and 29,

(e) each output multiplexer of each memory cluster to output data from one of the one or more memory blocks out of the memory, and each output multiplexer includes a bus multiplexer having inputs and an output, the inputs of the bus multiplexer coupled to the one or more memory blocks of the memory cluster to receive data (836; 848) and a bus state keeper (804; col. 9, line 2) coupled to the output of the bus multiplexer (802) and

the one of the plurality of buses between the plurality of memory clusters and the memory controller and maintains the state of the one of the plurality of buses between the plurality of memory clusters and the memory controller (buffers the signals) – claims 27, 28, 30, and 31.

The memory claims 40-45 and the memory claims 46-51 are equivalently rejected based on the same reason.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Norman taught memory clusters controlled by a memory controller.

Bauman taught memory clusters coupled to memory controller via individual buses.

Vrba taught an output multiplexer.

Rentschler et al taught an output multiplexer.

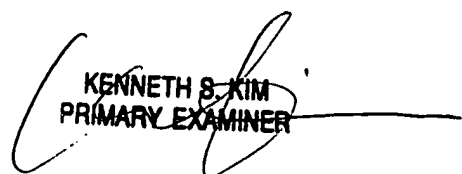
Nishioka et al taught a power control line from a memory controller.

Fujii et al taught a bus state keeper (fig. 32).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (571) 272-3627. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (571) 272-3632. The fax phone numbers for the organization where this application or proceeding is assigned are ((571) 273-8300 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

  
KENNETH S. KIM  
PRIMARY EXAMINER